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| 10/539,317 | 06/15/2005 | Ole Klembt Anderson | NL 021432 | 2733 |

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| EXAMINER | |
|---|---|
| KING, JOSHUA | |

| ART UNIT | PAPER NUMBER |
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| 2828 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/539,317 | ANDERSON ET AL. | |
| | Examiner | Art Unit | |
| | Joshua J. King | 2828 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

(e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

(f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject

matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation.

There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(l) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

2. The disclosure is objected to because of the following informalities: Please see 37 CFR 1.77 specifically "the text of the specification sections defined in paragraphs (b)(1) through (b)(12) of this section, if applicable, should be preceded by a section heading in uppercase and without underlining or bold type".

Appropriate correction is required.

***Claim Objections***

3. Claim 9 is objected to because of the following informalities: line 3 is missing a space between (ML 1) and operable. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, 4-5, 9-10 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Bissinger et al. (U.S. Pre-Grant Publication 2002/0048292).

6. Bissinger et al. discloses:

- **With respect to claims 1 and 9**, a first diode laser device (ML 1) (Fig. 1 element 30) injects light into a second diode laser device (SL 2) (Fig. 1 element $12_1$), the second diode laser device (SL 2) producing an output light signal (Fig. 1 element 78), characterized in that the output light signal has a wavelength dependent upon the wavelength of the light injected from the first diode laser device (ML 1) ([0080]).
- **With respect to claim 2 and 10**, the second diode laser device (SL 2) has an unmodulated output wavelength and a modulated output wavelength, the unmodulated output wavelength being output in the absence of light injected from the first diode laser device (ML 1), and the modulated output wavelength being output in the presence of light injected from the first diode laser device (ML 1) ([0164]-[0165]).
- **With respect to claims 4 and 12**, the first diode laser device (ML 1) is a low-power device (Fig. 1 element 30). The examiner notes that "a low-power" device is broad. Depending on the application any power level can be considered "low-power". In the interest of a compact prosecution the examiner has further rejected this claim under 103.

- **With respect to claims 5 and 13**, the second diode laser device (SL 2) is a high-power device (Fig. 1 element $12_1$). The examiner notes that "a high-power device" is broad. Depending on the application in which the laser is used any power level can be considered "high-power". In the interest of a compact prosecution the examiner has further rejected this claim under 103.
- **With respect to claim 14**, the first diode laser device (ML 1) is operable to inject the first output light signal into the second diode laser device (SL 2) via a polarizing beam splitter (PBS 8) (Fig. 1 element 50).
- **With respect to claim 15**, the first output light signal is supplied to the polarizing beam splitter (PBS 8) via a polarization adjustment device (4) (Fig. 1 element 52).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bissinger et al. (U.S. Pre-Grant Publication 2002/0048292).

9. Bissinger et al. does not specifically disclose:

- **With respect to claims 3 and 11**, the unmodulated output wavelength is longer than the modulated output wavelength.

10. However, Bissinger et al. does disclose:

- **With respect to claims 3 and 11**, the wavelength of the slave laser diode is adjustable ([0037]). The advantage of having a longer wavelength when the diode is not being used to transmit data (modulated signal) is that the diode conserves energy during this period. This is an extremely well known advantage based on physical principles.

11. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device disclosed by Bissinger et al. such that the slave laser diode emits at a longer wavelength when not outputting a modulated signal to decrease power consumed by the slave laser diode. A reference has been provided that shows the well known relationship between driving current and wavelength.

12. Claims 4-5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bissinger et al. (U.S. Pre-Grant Publication 2002/0048292) in view of Braiman et al. (U.S. Pre-Grant Publication 2003/0103534).

13. Bissinger et al. does not specifically disclose:

- **With respect to claims 4 and 12**, the first diode laser device (ML 1) is a low-power device.
- **With respect to claims 5 and 13**, the second diode laser device (SL 2) is a high-power device.

14. However, Braiman et al. discloses:

- **With respect to claims 4 and 12**, the first diode laser device (ML 1) is a low-power device ([0037]). The advantage is to produce a single mode high power laser ([0006]-[0008]).
- **With respect to claims 5 and 13**, the second diode laser device (SL 2) is a high-power device ([0036]).

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device disclosed by Bissinger et al. with a low-power master laser diode and a high-power slave laser diode as disclosed by Braiman et al. in order to a high power single mode device.

16. Claims 6-8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bissinger et al. (U.S. Pre-Grant Publication 2002/0048292) in view of Yeh et al. (U.S. Pre-Grant Publication 2003/0157290).

17. Bissinger et al. further discloses:

- **With respect to claims 6 and 16**, the light signal being modulated in accordance with a method as claimed in claim 1.

18. Bissinger et al. does not discloses:

- **With respect to claims 6 and 16**, writing information to an optical disc comprising outputting a light signal from a laser diode device (SL 2).
- **With respect to claim 7**, the information is written to the optical disc by supplying the light signal to a dye layer in the disc.

- **With respect to claim 8**, the information is written to the optical disc by supplying the light signal to a layer in the disc, which layer has a light absorption coefficient that varies with the wavelength of incident light.

19. However, Yeh et al. discloses:

- **With respect to claims 6 and 16**, an optical disk recording apparatus. The advantage is that recording quality is improved ([0005]).
- **With respect to claim 7**, the information is written to the optical disc by supplying the light signal to a dye layer in the disc ([0002]).
- **With respect to claim 8**, the information is written to the optical disc by supplying the light signal to a layer in the disc, which layer has a light absorption coefficient that varies with the wavelength of incident light ([0005]).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the device as disclosed by Bissinger et al. with as an optical disk recording apparatus as disclosed by Yeh et al. in order to improve the recording quality as it is well established in the optical disk recording art that wavelength stabilization is important to the quality of the recording.

***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lo et al. (U.S. Pre-Grant Publication 2002/0101898) see Fig. 8A. Carter et al. (U.S. Patent Number 4,862,467) see Fig. 2. Veldkamp et al. (U.S. Patent Number 4,649,351) see Fig. 12. Pocholle et al. (U.S. Patent Number 5,105,428) see Fig. 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua J. King whose telephone number is 571-270-1441. The examiner can normally be reached on Mon.-Thurs. 10:00-7:30 and every other Fri. 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Sun Harvey can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJK 07/19/2007